

AMERICAN FORK CITY

IMPACT FEE FACILITIES PLAN



June 2017

PREPARED BY

HORROCKS
ENGINEERS

IMPACT FEE FACILITIES PLAN SUMMARY

UTAH CODE LEGAL REQUIREMENTS

Utah law requires communities to prepare an Impact Fee Facilities Plan (IFFP) prior to preparing an impact fee analysis and establishing an impact fee. The code also outlines the requirements of an IFFP. An IFFP is required to identify the following:

- The demands placed on existing public facilities by new development;
- A proposed means by which the local political subdivision will meet those demands; and
- A general consideration of all potential revenue sources to finance the impacts on system improvements.

EXISTING LEVEL OF SERVICE

According to the Impact Fee Act, level of service is defined as “the defined performance standard or unit of demand for each capital component of a public facility within a service area.” The LOS of a roadway segment or intersection is used to determine if capacity improvements are necessary. LOS is measured on a roadway segment using its daily traffic volume as an approximation of PM peak hour congestion and at an intersection based on the average delay per vehicle. A standard of LOS D is a generally accepted LOS standard for urban areas and is used as the standard for American Fork.

DEMANDS PLACED ON EXISTING FACILITIES BY NEW DEVELOPMENT

As American Fork grows, new developments will require an increased roadway capacity throughout the City’s street network in order to provide an acceptable level of service. Included is a Transportation Improvement Program (TIP) that identifies specific projects needed to provide an acceptable LOS to the residents of American Fork. The total transportation capital improvements needed to maintain an acceptable LOS over the next 10 years (through 2026) would cost approximately **\$119,248,000**. Of the total cost, **\$56,536,000** is impact fee eligible.

PROPOSED MEANS TO MEET DEMANDS OF NEW DEVELOPMENT

All possible revenue sources have been considered as a means of financing transportation capital improvements needed as a result of new growth. The potential revenue sources that could be used to fund transportation needs as a result of new development are discussed in the IFFP:

- Federal Funding
- State Funding
- Partnering Jurisdictions
- Local Funding
- Grants
- Impact Fees

CONTENTS

Impact Fee Facilities Plan Summary	i
Utah Code Legal Requirements	i
Existing Level of Service	i
Demands Placed on Existing Facilities by New Development	i
Proposed Means to Meet Demands of New Development.....	i
Contents.....	ii
List of Figures	iii
List of Tables	iii
Impact Fee Facilities Plan.....	4
Utah Code Legal Requirements	4
Notice of Intent to Prepare an Impact Fee Facilities Plan	4
Existing Level of Service	4
Intersection Standards.....	5
Trips	5
System Improvements and Project Improvements	6
Proposed Level of Service	6
Existing Capacity to Accommodate Future Growth.....	6
Demands Placed on Facilities by New Development.....	6
Existing Roadway Network Conditions	7
Demands Placed on Existing Facilities by New Development	10
Transportation Improvement Program	10
Travel Demand from New Development.....	15
Proposed Means to Meet Demands of New Development.....	17
Federal Funding	17
State Funding	19
Partnering Jurisdictions.....	19
Local Funding	19
Grants	20
Impact Fees	20
IFFP Certification.....	21

LIST OF FIGURES

Figure 1 Existing Roadway Network	8
Figure 2 Existing Daily Traffic Volumes and LOS	9
Figure 3 2023 Transportation Improvement Program.....	11
Figure 4 Utah State Functional Classification Map	18

LIST OF TABLES

Table 1 Capacity Criteria in Vehicles per Day	4
Table 2 2026 Transportation Improvement Program.....	12
Table 3 Impact Fee Facilities Plan - Proportion Attributed to Growth	16

IMPACT FEE FACILITIES PLAN

UTAH CODE LEGAL REQUIREMENTS

Utah law requires communities to prepare an Impact Fee Facilities Plan (IFFP) prior to preparing an impact fee analysis and establishing an impact fee. The code also outlines the requirements of an IFFP. An IFFP is required to identify the following:

- The demands placed on existing public facilities by new development;
- A proposed means by which the local political subdivision will meet those demands; and
- A general consideration of all potential revenue sources to finance the impacts on system improvements.

This analysis incorporates the information provided in previous chapters regarding the upcoming demands on the existing infrastructure facilities that will be needed to accommodate future growth and provide an acceptable LOS. This section focuses on the improvements that are projected to be needed over the next ten years; however, Utah law requires that any impact fees collected for those improvements be spent within six years of being collected. Only capital improvement are included in this plan; all other maintenance and operation cost are assumed to be covered through the City’s General Fund as tax revenues increase as a result of additional development.

NOTICE OF INTENT TO PREPARE AN IMPACT FEE FACILITIES PLAN

In accordance with Utah Code, a local political subdivision must provide written notice of its intent to prepare an IFFP before preparing the Plan. This notice must be posted on the Utah Public Notice website. The City of American Fork has complied with this noticing requirement of the IFFP by posting notice in 2017.

EXISTING LEVEL OF SERVICE

According to the Impact Fee Act, level of service is defined as “the defined performance standard or unit of demand for each capital component of a public facility within a service area.” The LOS of a roadway segment or intersection is used to determine if capacity improvements are necessary. LOS is measured on a roadway segment using its daily traffic volume as an approximation of PM peak hour congestion and at an intersection based on the average delay per vehicle. A standard of LOS D is a generally accepted LOS standard for urban areas and is used as the standard for American Fork. This allows for speeds at or near free-flow speeds, but with some congestion during the peak times of the day. At intersections, LOS D means that vehicles should not have to wait more than one cycle to proceed through the intersection and experience delays less than 35 seconds, according to the Highway Capacity Manual 2010. **Table 1** summarizes the maximum capacities for roadway segments used by American Fork.

Table 1 Capacity Criteria in Vehicles per Day

Lanes	Arterial	Collector
2	5,500	5,000
3	13,000	11,500
5	30,500	NA
7	46,000	NA

INTERSECTION STANDARDS

The performance of intersections has a large effect on the level of service of the roadway network. Intersections have different control types such as: no control, stop control, signal, roundabout, or yield. The level of service for each type of intersection is calculated depending on its control type. Intersection improvements will be necessary in some cases to maintain the desired level of service. One method to reduce costs is to coordinate the placement of signal wiring, foundations, and other features with roadway construction before the placement of the actual traffic signals and other elements are needed. The costs of these intersection improvements have been included in the roadway network cost estimates in **Table 2**. The total costs for the full installation of these intersection improvements may be postponed, depending on the specific needs of the intersections in the future.

TRIPS

The unit of demand for transportation impact is the vehicle trip. A vehicle trip is defined by the Institute of Transportation Engineers (ITE) as a single or one-directional vehicle movement to or from a site during a normal week day. The total traffic impact of a new development can be determined by the sum of the total number of vehicle trips generated by a development in a day. This trip generation number or impact can be estimated for an individual development using the ITE Trip Generation Manual (currently 9th edition). This publication uses national data studied over decades to assist traffic engineering professionals to determine the likely impact of new development on transportation infrastructure.

There is a minor discrepancy in the way ITE calculates trips and the way trips or roadway volumes are calculated in the travel demand model used in the American Fork TMP. This discrepancy is explained by the model roadway volumes and capacities being calculated using daily traffic volumes rather than trips on the roadway. Essentially, this means that a travel demand model “trip” or unit of volume is counted once as a vehicle leaves home, travels on the road network, and then arrives at work. This vehicle will only be counted as it travels on the roadway network. The ITE Trip Generation method uses driveway counts as its measure of a trip. Therefore a vehicle making the same journey will be counted once as it leaves home and once again as it arrives at work for a total of two trips. This can be rectified simply by adjusting the ITE Trip Generation rates by one half, this calculation will be evident in the IFA.

An additional consideration is that certain developments do not generate primary trips or trips that originated for the sole purpose of visiting that development. An example of a primary trip is a home based work trip where someone leaves their house with the express purpose of going to work. This primary trip has been generated by a combination of the home where the trip originated and the place of occupation where the trip is terminated. Thus, it is easily understood that the impact of this trip should be attributed to the housing development and workplace development since without either of these locations, the trip doesn’t happen. Some trips are not primary trips, they are defined as pass-by trips. This means that the trip (crossing the driveway of a development) was generated by a driver deciding to make a stop on their way to their primary destination. Good examples of pass-by trips are someone that stops at the gas station on their way to work (a gas station is a pass-by trip) or a driver that is enticed to stop at a fast food restaurant as they drive by because the “HOT DONUTS” sign is illuminated (the fast food restaurant is a pass-by trip). Pass-by trips do not add traffic to the roadway and, therefore, do not create additional impact. Each land use type in the ITE Trip Generation Manual has a suggested reduction for pass-by trips where applicable. In each case, the trip reduction rate will be applied to the trip generation rate used in the IFA.

SYSTEM IMPROVEMENTS AND PROJECT IMPROVEMENTS

There are four primary classifications of roads, which include local streets, collectors, arterials, and freeways/expressways. The City of American Fork classifies street facilities based on the relative amounts of through and land-access service they provide. Local streets primarily serve land-access functions, while freeways and expressways are primarily meant for mobility. Each classification may have a variable amount of lanes, which is a function of the expected traffic volume and serves as the greatest measure of roadway capacity.

Improvements to collectors and arterials are considered “system improvements” as defined in the Utah Impact Fee Law, as these streets serve users from multiple developments. All system improvements must comply with the minimum cross-sections included in the American Fork TMP. System improvements may include anything within the roadway, such as curb and gutter, asphalt, road base, lighting, and signing for collectors and arterials. These projects are eligible to be funded with impact fees and are included in this IFFP.

PROPOSED LEVEL OF SERVICE

The proposed level of service provides a standard of evaluation for future roadway conditions. This standard will determine whether or not a roadway will need improvements. According to the Utah Impact Fee Law, the proposed level of service may:

1. Diminish or equal the existing level of service
2. Exceed the existing level of service if, independent of the use of impact fees, the political subdivision or private entity provides, implements, and maintains the means to increase the existing level of service for existing demand within six years of the date on which new growth is charged for the proposed level of service; or
3. Establish a new public facility if, independent of the use of impact fees, the political subdivision or private entity provides, implements, and maintains the means to increase the existing level of service for existing demand within six years of the date on which new growth is charged for the proposed level of service.

This IFFP will not make any changes to the existing level of service, and LOS D will be the standard by which the impacts of future growth will be evaluated.

EXISTING CAPACITY TO ACCOMMODATE FUTURE GROWTH

An important element of the IFFP is the determination of excess capacity on the roadway network. Excess capacity is defined as the amount of available capacity on any given street in the roadway network under existing conditions. This capacity is available for new development in the city before additional infrastructure will be needed. This represents a buy-in component from the City if the existing residents/property owners have already paid for these improvements. New roads do not have any excess capacity and roads which are not under City jurisdiction have their capacity information removed from the calculations. This analysis does not include analysis for any existing roadway segments to determine existing excess capacity.

DEMANDS PLACED ON FACILITIES BY NEW DEVELOPMENT

To meet the requirements of the Utah Impact Fee law, to “identify demands placed upon existing public facilities by new development activity at the proposed level of service” and to “identify the means by which the political subdivision or private entity will meet those growth demands”, the following steps were completed and are explained in further detail in the following sections:

1. **Existing Demand-** The traffic demand at the present time was identified using traffic counts.
2. **Existing Capacity-** The capacity of the current roadway network was estimated using the calculated LOS.
3. **Existing Deficiencies-** The deficiencies in the current network were identified by comparing the LOS of the roadways to the LOS standard.
4. **Future Demand-** The future demand on the network was estimated using development projections.
5. **Future Deficiencies-** The deficiencies in the future network were identified by comparing the calculated future LOS with the LOS standard.
6. **Recommended Improvements-** Recommendations were made that will help meet future demands.

EXISTING ROADWAY NETWORK CONDITIONS

CONVERSIONS OF GROWTH AND DEVELOPMENT PROJECTIONS TO TRIP GENERATIONS

The basis of the future travel demand was projected using the Mountainland Association of Governments (MAG) Travel Demand Model. The inputs to the model consist of socio-economic and land use data provided by MAG and the City. The outputs from the model include peak hour trips and daily traffic volumes on each of the roadways in the network. The MAG Travel Demand Model was calibrated to existing traffic conditions in American Fork. Traffic counts for state roads were collected from UDOT and include annual average daily traffic (AADT) volumes as defined in *Traffic on Utah Highways*. On City owned roadways, traffic counts were either provided by American Fork or were manually counted as part of the IFFP.

EXISTING FUNCTIONAL CLASSIFICATION AND LEVEL OF SERVICE

The existing functional classification in American Fork is shown in **Figure 1**. The LOS was calculated according to the guidelines explained in the Level of Service section for the existing roadway network and is included in **Figure 2**.

This map illustrates the proposed transit network for American Fork, Utah, overlaid on a detailed street map. The map includes a legend in the top left corner defining the following elements:

- I-15:** Represented by a thick black line.
- Arterial (5-7 Lanes):** Represented by a red line.
- Major Collector (3 Lanes):** Represented by a blue line.
- Minor Collector (2 Lanes):** Represented by a green line.
- HAWK:** Represented by a black pedestrian icon.
- Roundabout:** Represented by a yellow diamond icon.
- Signal:** Represented by a traffic light icon.
- City Boundary:** Represented by a yellow outline.

The map shows a grid of streets with various labels, including North-South streets (e.g., 900 N, 700 N, 500 N, 300 N, 100 N, 50 S, 200 S, 400 S, 600 S, 800 S, 1000 S, 1200 N, 1400 N, 1600 N, 1800 N, 2000 N, 2200 N, 2400 N, 2600 N, 2800 N, 3000 N, 3200 N, 3400 N, 3600 N, 3800 N, 4000 N, 4200 N, 4400 N, 4600 N, 4800 N, 5000 N, 5200 N, 5400 N, 5600 N, 5800 N, 6000 N, 6200 N, 6400 N, 6600 N, 6800 N, 7000 N, 7200 N, 7400 N, 7600 N, 7800 N, 8000 N, 8200 N, 8400 N, 8600 N, 8800 N, 9000 N, 9200 N, 9400 N, 9600 N, 9800 N, 10000 N, 10200 N, 10400 N, 10600 N, 10800 N, 11000 N, 11200 N, 11400 N, 11600 N, 11800 N, 12000 N, 12200 N, 12400 N, 12600 N, 12800 N, 13000 N, 13200 N, 13400 N, 13600 N, 13800 N, 14000 N, 14200 N, 14400 N, 14600 N, 14800 N, 15000 N, 15200 N, 15400 N, 15600 N, 15800 N, 16000 N, 16200 N, 16400 N, 16600 N, 16800 N, 17000 N, 17200 N, 17400 N, 17600 N, 17800 N, 18000 N, 18200 N, 18400 N, 18600 N, 18800 N, 19000 N, 19200 N, 19400 N, 19600 N, 19800 N, 20000 N, 20200 N, 20400 N, 20600 N, 20800 N, 21000 N, 21200 N, 21400 N, 21600 N, 21800 N, 22000 N, 22200 N, 22400 N, 22600 N, 22800 N, 23000 N, 23200 N, 23400 N, 23600 N, 23800 N, 24000 N, 24200 N, 24400 N, 24600 N, 24800 N, 25000 N, 25200 N, 25400 N, 25600 N, 25800 N, 26000 N, 26200 N, 26400 N, 26600 N, 26800 N, 27000 N, 27200 N, 27400 N, 27600 N, 27800 N, 28000 N, 28200 N, 28400 N, 28600 N, 28800 N, 29000 N, 29200 N, 29400 N, 29600 N, 29800 N, 30000 N, 30200 N, 30400 N, 30600 N, 30800 N, 31000 N, 31200 N, 31400 N, 31600 N, 31800 N, 32000 N, 32200 N, 32400 N, 32600 N, 32800 N, 33000 N, 33200 N, 33400 N, 33600 N, 33800 N, 34000 N, 34200 N, 34400 N, 34600 N, 34800 N, 35000 N, 35200 N, 35400 N, 35600 N, 35800 N, 36000 N, 36200 N, 36400 N, 36600 N, 36800 N, 37000 N, 37200 N, 37400 N, 37600 N, 37800 N, 38000 N, 38200 N, 38400 N, 38600 N, 38800 N, 39000 N, 39200 N, 39400 N, 39600 N, 39800 N, 40000 N, 40200 N, 40400 N, 40600 N, 40800 N, 41000 N, 41200 N, 41400 N, 41600 N, 41800 N, 42000 N, 42200 N, 42400 N, 42600 N, 42800 N, 43000 N, 43200 N, 43400 N, 43600 N, 43800 N, 44000 N, 44200 N, 44400 N, 44600 N, 44800 N, 45000 N, 45200 N, 45400 N, 45600 N, 45800 N, 46000 N, 46200 N, 46400 N, 46600 N, 46800 N, 47000 N, 47200 N, 47400 N, 47600 N, 47800 N, 48000 N, 48200 N, 48400 N, 48600 N, 48800 N, 49000 N, 49200 N, 49400 N, 49600 N, 49800 N, 50000 N, 50200 N, 50400 N, 50600 N, 50800 N, 51000 N, 51200 N, 51400 N, 51600 N, 51800 N, 52000 N, 52200 N, 52400 N, 52600 N, 52800 N, 53000 N, 53200 N, 53400 N, 53600 N, 53800 N, 54000 N, 54200 N, 54400 N, 54600 N, 54800 N, 55000 N, 55200 N, 55400 N, 55600 N, 55800 N, 56000 N, 56200 N, 56400 N, 56600 N, 56800 N, 57000 N, 57200 N, 57400 N, 57600 N, 57800 N, 58000 N, 58200 N, 58400 N, 58600 N, 58800 N, 59000 N, 59200 N, 59400 N, 59600 N, 59800 N, 60000 N, 60200 N, 60400 N, 60600 N, 60800 N, 61000 N, 61200 N, 61400 N, 61600 N, 61800 N, 62000 N, 62200 N, 62400 N, 62600 N, 62800 N, 63000 N, 63200 N, 63400 N, 63600 N, 63800 N, 64000 N, 64200 N, 64400 N, 64600 N, 64800 N, 65000 N, 65200 N, 65400 N, 65600 N, 65800 N, 66000 N, 66200 N, 66400 N, 66600 N, 66800 N, 67000 N, 67200 N, 67400 N, 67600 N, 67800 N, 68000 N, 68200 N, 68400 N, 68600 N, 68800 N, 69000 N, 69200 N, 69400 N, 69600 N, 69800 N, 70000 N, 70200 N, 70400 N, 70600 N, 70800 N, 71000 N, 71200 N, 71400 N, 71600 N, 71800 N, 72000 N, 72200 N, 72400 N, 72600 N, 72800 N, 73000 N, 73200 N, 73400 N, 73600 N, 73800 N, 74000 N, 74200 N, 74400 N, 74600 N, 74800 N, 75000 N, 75200 N, 75400 N, 75600 N, 75800 N, 76000 N, 76200 N, 76400 N, 76600 N, 76800 N, 77000 N, 77200 N, 77400 N, 77600 N, 77800 N, 78000 N, 78200 N, 78400 N, 78600 N, 78800 N, 79000 N, 79200 N, 79400 N, 79600 N, 79800 N, 80000 N, 80200 N, 80400 N, 80600 N, 80800 N, 81000 N, 81200 N, 81400 N, 81600 N, 81800 N, 82000 N, 82200 N, 82400 N, 82600 N, 82800 N, 83000 N, 83200 N, 83400 N, 83600 N, 83800 N, 84000 N, 84200 N, 84400 N, 84600 N, 84800 N, 85000 N, 85200 N, 85400 N, 85600 N, 85800 N, 86000 N, 86200 N, 86400 N, 86600 N, 86800 N, 87000 N, 87200 N, 87400 N, 87600 N, 87800 N, 88000 N, 88200 N, 88400 N, 88600 N, 88800 N, 89000 N, 89200 N, 89400 N, 89600 N, 89800 N, 90000 N, 90200 N, 90400 N, 90600 N, 90800 N, 91000 N, 91200 N, 91400 N, 91600 N, 91800 N, 92000 N, 92200 N, 92400 N, 92600 N, 92800 N, 93000 N, 93200 N, 93400 N, 93600 N, 93800 N, 94000 N, 94200 N, 94400 N, 94600 N, 94800 N, 95000 N, 95200 N, 95400 N, 95600 N, 95800 N, 96000 N, 96200 N, 964

Figure 2 - Existing Daily Traffic and LOS



DEMANDS PLACED ON EXISTING FACILITIES BY NEW DEVELOPMENT

TRANSPORTATION IMPROVEMENT PROGRAM

As American Fork grows, new developments will require an increased roadway capacity throughout the City's street network in order to provide an acceptable level of service. The City has developed a Transportation Improvement Program (TIP) that identifies specific projects needed to provide an acceptable LOS to the residents of American Fork. The total transportation capital improvements needed to maintain an acceptable LOS over the next 10 years (through 2026) would cost approximately **\$119,248,000** as shown in **Table 2**. Of the total cost, **\$56,536,000** is impact fee eligible. Only roads classified as collectors and above are included in the ten year impact fee facilities plan. It is assumed that local roads will be paid for by developers, as these roads do not meet the regional demands of the entire City. **Figure 3** shows the ten year impact fee facilities plan projects.



Figure 3 - Impact Fee Facilities Plan Projects

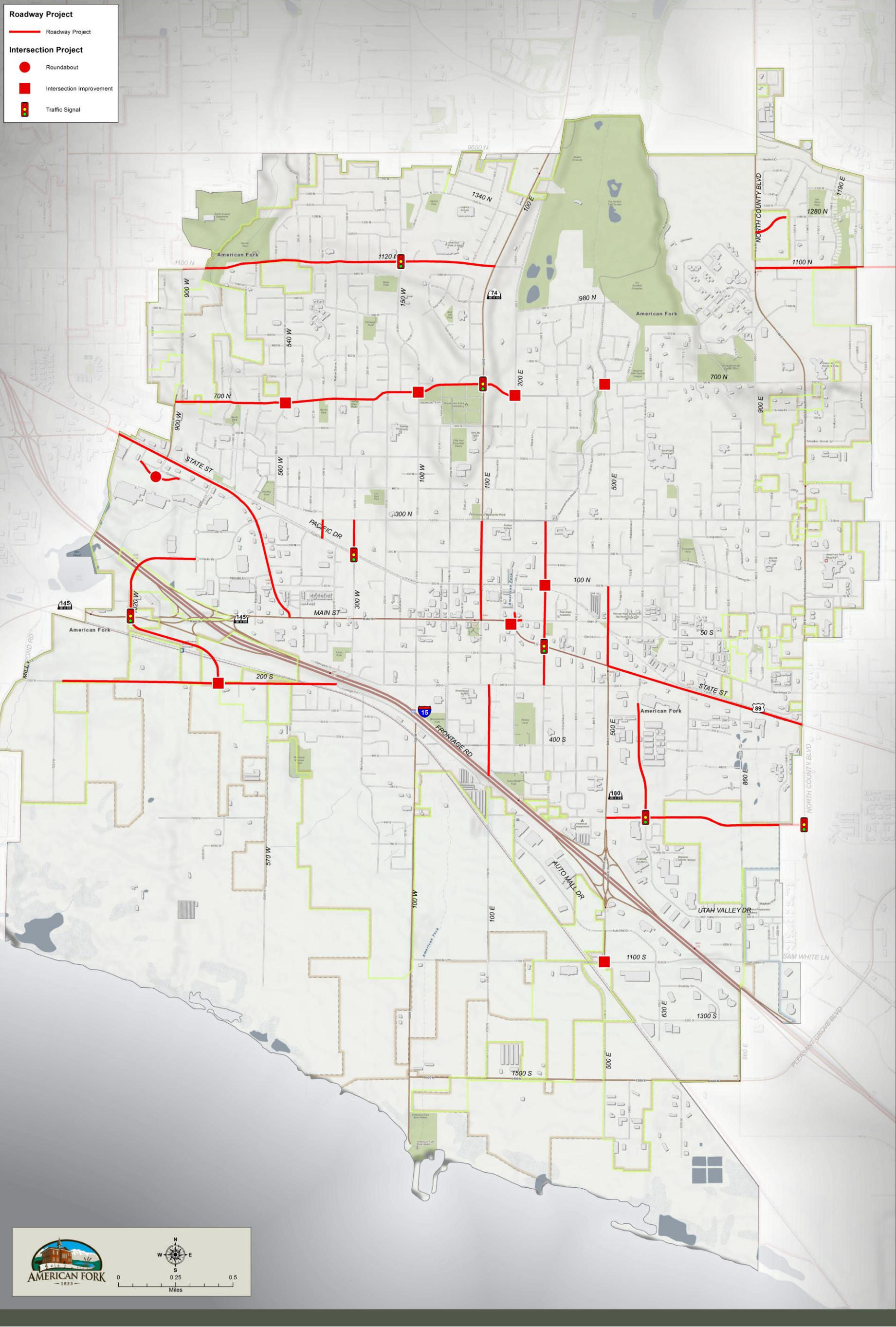


Table 2 2026 Transportation Improvement Program

American Fork City Transportation Improvement Program (TIP)								
Type of Improvement	Roadway or Location	From	To	Jurisdiction(s)	Total Project Costs¹	Potential Funding Source²	American Fork Cost (Impact Fee Eligible)	Project Year (Range)
Upgrades to Major Collector (2 to 3-Lanes)	1120 North	900 West	100 East	City	\$12,253,000	F, C, O	\$12,253,000	2022-2026
Intersection Improvement	900 West & Grassland Dr	-	-	City	\$2,245,000	C, O	\$2,245,000	2017-2021
New Major Collector (3-Lanes)	700 North	100 East	200 East	City	\$2,172,000	F, C, O	\$2,172,000	2022-2026
Widen to Arterial (5-Lanes)	500 East	State St	Pacific Dr (100 N)	City	\$3,092,000	F, S, C, O	\$3,092,000	2022-2026
Intersection Improvement	700 North & 500 East	-	-	City	\$705,000	F, C, O	\$705,000	2022-2026
Upgrades to Major Collector (2 to 3-Lanes)	700 North	900 West	100 East	City	\$7,498,000	F, C, O	\$7,498,000	2022-2026
Widen to Minor Collector (2-Lanes)	1100 North	North County Blvd	East City-Limits	City	\$2,559,000	C, O	\$2,559,000	2017-2021
Upgrades to Principal Arterial (7-Lanes)	State St	West City-Limits	Main Street	City/UDOT	12,000,000	F, S, C, O	\$0	2022-2026
Widen to Collector (2 to 3-Lanes)	400 West	300 North	Pacific Dr	City	\$225,000	F, C, O	\$225,000	2017-2021
New Significant Local Road	1280 North	North County Blvd	1030 East	City	\$1,828,000	C, O	\$0	2022-2026
Intersection Improvement	200 East & Main St/ State St	-	-	City/UDOT	\$705,000	F, S, C, O	\$0	2017-2021
New Arterial (5-Lanes)	620 South	600 East	East City-Limits	City	\$9,342,000	C, O	\$9,342,000	2022-2026

American Fork City Transportation Improvement Program (TIP)

Type of Improvement	Roadway or Location	From	To	Jurisdiction(s)	Total Project Costs ¹	Potential Funding Source ²	American Fork Cost (Impact Fee Eligible)	Project Year (Range)
Widen to Arterial (5-Lanes)	620 South	500 East	600 East	City	\$1,249,000	C, O	\$1,249,000	2022-2026
Widen to Collector (2 to 3-Lanes)	300 West	300 North	Pacific Dr	City	\$508,000	C, O	\$508,000	2022-2026
New Traffic Signal	Pacific Dr & 300 West	-	-	City	\$300,000	F, C, O	\$300,000	2022-2026
New Major Collector (3-Lanes)	Pacific Dr (Extension)	Pioneer Crossing	Meadow Lane	City/UDOT	\$19,700,000	F, S, C, O	\$0	2017-2021
Widen to Arterial (3 to 5-Lanes)	100 East	Main St	300 North	City/UDOT	\$3,500,000	F, S, C, O	\$0	2017-2021
Widen to Collector (2 to 3-Lanes)	300 East	300 North	200 South	City	\$2,261,000	C, O	\$2,261,000	2017-2021
Upgrades to Principal Arterial (6 to 7-Lanes)	State St	500 East	East City-Limits	City/UDOT	\$21,500,000	F, S, C, O	\$0	2017-2021
New Collector (2 Lanes)	600 East (Extension)	620 South	250 South	City	\$1,979,000	O	\$0	2017-2021
New Major Collector (3-Lanes)	1020 West Extension	Pioneer Crossing	200 South	City	\$2,199,000	F, S, C, O	\$2,199,000	2017-2021
Widen to Arterial (5 Lanes)	200 South	West City-Limits	300 West / Frontage Rd	City	\$7,009,000	F, C, O	\$7,009,000	2017-2021
Widen to Arterial (2 to 3-Lanes)	100 East	200 South	I-15	City	\$1,624,000	C,O	\$1,624,000	2017-2021
New Traffic Signal	1120 North & 150 West	-	-	City	\$300,000	F, C, O	\$300,000	2022-2026
Intersection Improvement	700 North & 540 West	-	-	City	\$300,000	F, C, O	\$300,000	2022-2026
Intersection Improvement	700 North & 100 West	-	-	City	\$300,000	F, C, O	\$300,000	2022-2026

American Fork City Transportation Improvement Program (TIP)

Type of Improvement	Roadway or Location	From	To	Jurisdiction(s)	Total Project Costs ¹	Potential Funding Source ²	American Fork Cost (Impact Fee Eligible)	Project Year (Range)
New Traffic Signal	700 North & 100 East	-	-	City/UDOT	\$300,000	F, S, C, O	\$0	2022-2026
Intersection Improvement	700 North & 200 East	-	-	City	\$300,000	F, C, O	\$300,000	2022-2026
New Traffic Signal	Pioneer Crossing & 1020 West	-	-	City/UDOT	\$300,000	F, S, C, O	\$0	2017-2021
New Traffic Signal	State St & 300 East	-	-	City/UDOT	\$300,000	F, S, C, O	\$0	2017-2021
Intersection Improvement	100 North & 300 East	-	-	City	\$300,000	F, C, O	\$300,000	2017-2021
New Traffic Signal	600 East & 620 South	-	-	City	\$300,000	C, O	\$300,000	2017-2021
New Traffic Signal	N County Blvd & 620 South	-	-	City/UDOT	\$300,000	F, S, C, O	\$0	2022-2026
Intersection Improvement	200 South & 1020 West Extension	-	-	City	\$310,000	C, O	\$310,000	2017-2021
Intersection Improvement	500 East & 1100 South	-	-	City	\$465,000	F, C, O	\$465,000	2017-2021
Total for Improvements needed by 2026					\$120,228,000		\$57,816,000	

¹Cost represents existing (2017) construction, right of way, and engineering costs.

²Potential Funding Source: F-Federal, S-State, C-City, and O-Other

TRAVEL DEMAND FROM NEW DEVELOPMENT

In order to determine the portion of future traffic that can be attributed to new development, travel demand modeling methodology using the MAG travel demand model was utilized. This is considered industry best practice and uses the best available data.

Travel Demand is a dynamic function of many different inputs, including socioeconomic characteristics, land use planning and roadway functional type. The travel demand model generates trips in TAZ, based on these and other inputs and then distributes these trips to attraction TAZ via the roadway network. Average Daily Traffic volumes can then be extracted from the individual roadway links in the network to assess the operating conditions of the network.

Using the travel demand model, it is possible to estimate the number of PM trips originating or terminating in American Fork for existing and future conditions. The difference between the future PM trips and the existing PM trips (the number of new trips in the City) becomes the denominator in the equation used to calculate the impact fee cost per PM peak hour trip for new development. American Fork City currently generates approximately 23,385 one-way PM peak hour trips. In 2040, this number is expected to increase to 38,985, an increase of 67%. The projected 2026 PM peak hour trip number for American Fork City is 31,034, a 33% increase on today's value.

Only the proportion of the roadway project which can be attributed to 10 year growth can be collected. The remaining will be collected in future impact fee periods as a "buy-in" component of the impact fee. **Table 3** shows the proportion of each project which will be attributed to 10 year growth. This is calculated using the existing, 10 year, and 2040 traffic volumes. The total growth for each roadway project is calculated as the difference between the existing and the 2040 traffic volumes. The 10 year growth is determined as the difference between the 10 year and existing volumes.

There is traffic which use roadways within American Fork which are considered pass-through traffic. A vehicle trip is considered pass-through when the origin and destination are outside of American Fork. Impact fees cannot be collected for these vehicles. A portion of the users on new roadways will be existing roadways users and is removed from the impact fee calculation. The 10 year growth includes a reduction for both pass-through and existing user share traffic and is included in **Table 3**.

Table 3 Impact Fee Facilities Plan - Proportion Attributed to Growth

Impact Fee Facilities Plan – Proportion Attributed to Growth																
Type of Improvement	Roadway or Location	From	To	Existing Volume	10 Year Volume	10 Year Growth	Pass-Through %	Pass-Through Volume	Existing User Share %	Existing User Share Volume	10 Year Growth	2040 Volume	Total Growth	Growth Beyond 10 Years	Proportion Attributed to 10 Year Growth	Proportion Attributed to Growth Beyond 10 Years
Upgrades to Major Collector (2 to 3-Lanes)	1120 North	900 West	100 East	1,000	3,500	2,500	12.3%	309	0.0%	0	2,191	4,000	3,000	500	73.0%	16.7%
New Major Collector (3-Lanes)	700 North	100 East	200 East	0	9,800	9,800	27.8%	2,724	2.0%	196	6,880	12,800	12,800	3,000	53.8%	23.4%
Upgrades to Major Collector (2 to 3-Lanes)	700 North	900 West	100 East	9,300	18,100	8,800	34.1%	3,004	0.0%	0	5,796	21,100	11,800	3,000	49.1%	25.4%
Widen to Minor Collector (2-Lanes)	1100 North	North County Blvd	East City-Limits	1,200	1,600	400	1.0%	4	0.0%	0	396	5,000	3,800	3,400	10.4%	89.5%
Widen to Collector (2 to 3-Lanes)	400 West	300 North	Pacific Dr	2,300	3,000	700	1.0%	7	0.0%	0	693	3,200	900	200	77.0%	22.2%
New Arterial (5-Lanes)	620 South	600 East	East City-Limits	0	11,700	11,700	0.0%	4	2.0%	234	11,462	12,000	12,000	300	95.5%	2.5%
Widen to Arterial (5-Lanes)	620 South	500 East	600 East	8,900	11,700	2,800	0.0%	1	0.0%	0	2,799	12,000	3,100	300	90.3%	9.7%
Widen to Collector (2 to 3-Lanes)	300 West	300 North	Pacific Dr	7,000	9,700	2,700	1.0%	27	0.0%	0	2,673	10,000	3,000	300	89.1%	10.0%
New Major Collector (3-Lanes)	Pacific Dr (Extension)	Pioneer Crossing	Meadow Lane	0	5,000	5,000	72.0%	3,600	2.0%	100	1,300	7,700	7,700	2,700	16.9%	35.1%
Widen to Arterial (3 to 5-Lanes)	100 East	Main St	300 North	20,300	24,300	4,000	24.4%	976	0.0%	0	3,024	31,400	11,100	7,100	27.2%	64.0%
Widen to Collector (2 to 3-Lanes)	300 East	300 North	200 South	4,400	5,100	700	2.0%	14	0.0%	0	686	6,000	1,600	900	42.9%	56.3%
New Major Collector (3-Lanes)	1020 West Extension	Pioneer Crossing	200 South	0	3,300	3,300	1.0%	33	2.0%	66	3,201	8,500	8,500	5,200	37.7%	61.2%
Widen to Major Collector (2 to 3-Lanes)	100 East	200 South	I-15	2,200	2,900	700	50.0%	350	0.0%	0	350	4,000	1,800	1,100	19.4%	61.1%
Widen to Major Collector (5 Lanes)	200 South	West City- Limits	300 West / Frontage Rd	7,000	28,700	21,700	48.8%	10,585	0.0%	0	11,115	31,100	24,100	2,400	46.1%	10.0%

PROPOSED MEANS TO MEET DEMANDS OF NEW DEVELOPMENT

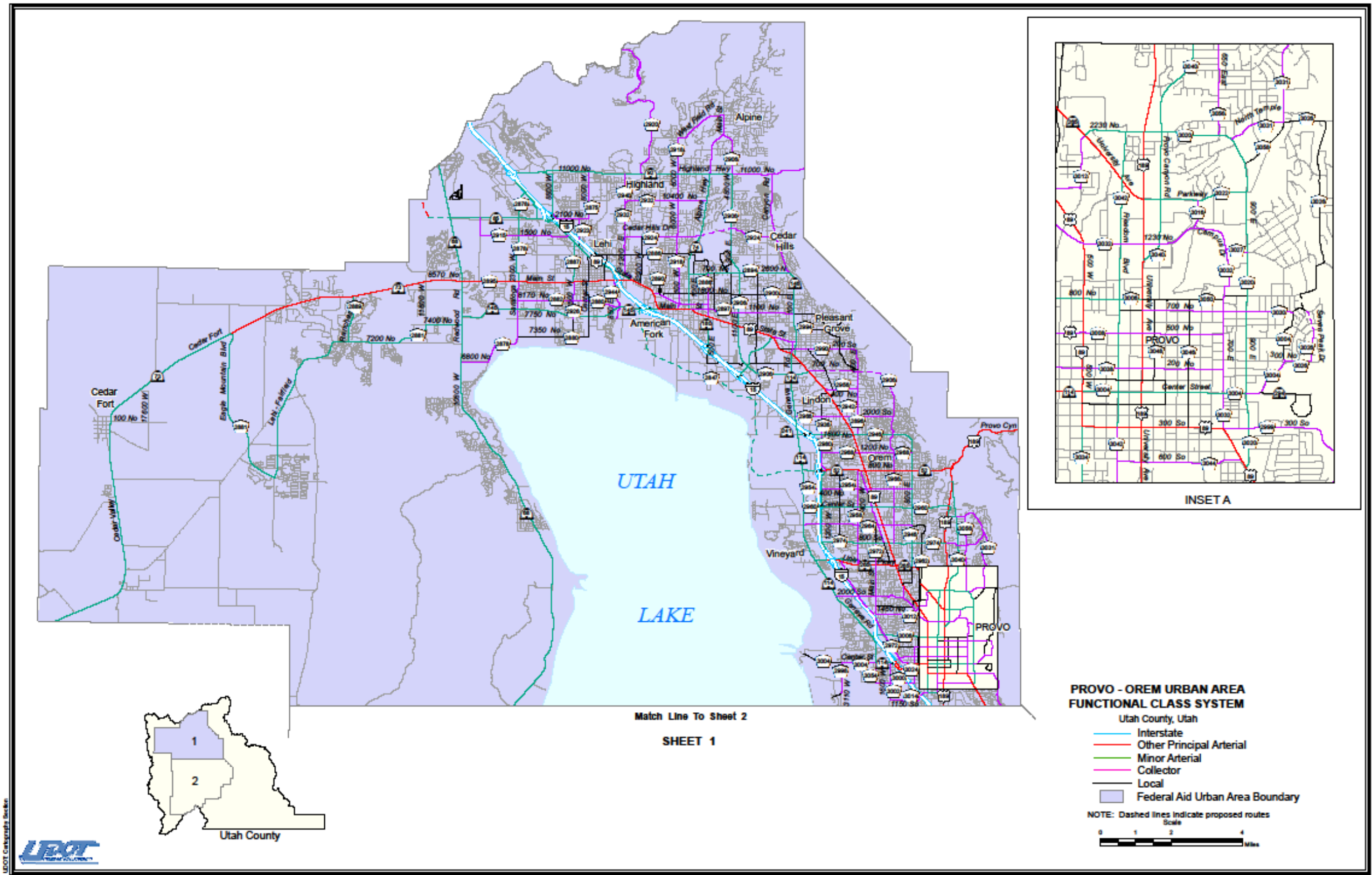
All possible revenue sources have been considered as a means of financing transportation capital improvements needed as a result of new growth. This section discusses the potential revenue sources that could be used to fund transportation needs as a result of new development. Funding sources for transportation are essential if American Fork City recommended improvements are to be built. The following paragraphs further describe the various transportation funding sources available to the City.

FEDERAL FUNDING

Federal monies are available to cities and counties through the federal-aid program. UDOT administers the funds. In order to be eligible, a project must be listed on the five-year Statewide Transportation Improvement Program (STIP).

The Surface Transportation Program (STP) funds projects for any roadway with a functional classification of a collector street or higher as established on the Utah State Functional Classification Map (**Figure 4**). STP funds can be used for both rehabilitation and new construction. The Joint Highway Committee programs a portion of the STP funds for projects around the state in urban areas. Another portion of the STP funds can be used for projects in any area of the state at the discretion of the State Transportation Commission. Transportation Enhancement funds are allocated based on a competitive application process. The Transportation Enhancement Committee reviews the applications and then a portion of those are passed to the State Transportation Commission. Transportation enhancements include 12 categories ranging from historic preservation, bicycle and pedestrian facilities and water runoff mitigation. Other federal and state trails funds are available from the Utah State Parks and Recreation Program.

Figure 4 Utah State Functional Classification Map



Approved: 2005 Technical Revision: 10/3/2012

MAG accepts applications for federal funds through local and regional government jurisdictions. The MAG Technical Advisory and Regional Planning committees select projects for funding every two years. The selected projects form the Transportation Improvement Program (TIP). In order to receive funding, projects should include one or more of the following aspects:

- Congestion Relief – spot improvement projects intended to improve Levels of Service and/or reduce average delay along those corridors identified in the Regional Transportation Plan as high congestion areas.
- Mode Choice – projects improving the diversity and/or usefulness of travel modes other than single occupant vehicles.
- Air Quality Improvements – projects showing demonstrable air quality benefits.
- Safety – improvements to vehicular, pedestrian, and bicyclist safety.

STATE FUNDING

The distribution of State Class B and C Program monies is established by State Legislation and is administered by the State Department of Transportation. Revenues for the program are derived from State fuel taxes, registration fees, driver license fees, inspection fees, and transportation permits. Seventy-five percent of these funds are kept by UDOT for their construction and maintenance programs. The rest is made available to counties and cities. As many of the roads in American Fork fall under UDOT jurisdiction, it is in the interests of the City that staff is aware of the procedures used by UDOT to allocate those funds and to be active in requesting the funds be made available for UDOT owned roadways in the City.

Class B and C funds are allocated to each city and county by a formula based on population, road mileage, and land area. Class B funds are given to counties, and Class C funds are given to cities and towns. Class B and C funds can be used for maintenance and construction projects; however, thirty percent of those funds must be used for construction or maintenance projects that exceed \$40,000. The remainder of these funds can be used for matching federal funds or to pay the principal, interest, premiums, and reserves for issued bonds.

PARTNERING JURISDICTIONS

Transportation routes often span multiple jurisdictions and provide regional significance to the transportation network. As a result, other government jurisdictions often help pay for such regional benefits. Those jurisdictions could include the Federal Government, the State Government or the UDOT, or MAG. The City will need to continue to partner and work with these other jurisdictions to ensure the adequate funds are available for the specific improvements necessary to maintain an acceptable LOS. The City will also need to partner with adjacent communities to ensure corridor continuity across jurisdictional boundaries (i.e., arterials connect with arterials; collectors connect with collectors, etc.).

LOCAL FUNDING

Most cities utilize general fund revenues for their transportation programs. Another option for transportation funding is the creation of special improvement districts. These districts are organized for the purpose of funding a single specific project that benefits an identifiable group of properties. Another source of funding used by cities includes revenue bonding for projects felt to benefit the entire community.

Private interests often provide resources for transportation improvements. Developers construct the local streets within subdivisions and often dedicate right-of-way and participate in the construction of collector/arterial streets adjacent to their developments. Developers can also be considered a possible source of funds for projects through the use of impact fees. These fees are assessed as a result of the impacts a particular development will have on the surrounding roadway system, such as the need for traffic signals or street widening.

GENERAL FUND REVENUES

General fund revenues are typically reserved for operation and maintenance purposes as they relate to transportation. However, general funds could be used if available to fund the expansion or introduction of specific services. American Fork City does not currently have a general fund budgeted line item for transportation improvements. It is recommended that a plan be put in place to address this and to develop an annual budget amount to fund transportation projects should other funding options fall short or the needed amount.

GENERAL OBLIGATION BONDS

General obligation bonds are debt paid for or backed by the City's taxing power. In general, facilities paid for through this revenue stream are in high demand amongst the community. Typically, general obligation bonds are not used to fund facilities that are needed as a result of new growth because existing residents would be paying for the impacts of new growth. As a result, general obligation bonds are not considered a fair means of financing future facilities needed as a result of new growth.

SPECIAL ASSESSMENT AREAS (SAA)

Certain areas might require different needs or methods of funding other than traditional revenue sources. An SAA can be created for infrastructure needs that benefit or encompass specific areas of the City. Creation of the SAA may be initiated by the municipality by a resolution declaring the public health, convenience, and necessity requiring the creation of a SAA. The boundaries and services provided by the district must be specified and a public hearing held prior to creation of the SAA. Once the SAA is created, funding can be obtained from tax levies, bonds, and fees when approved by the majority of the qualified electors of the SAA. These funding mechanisms allow the costs to be spread out over time. Through the SAA, tax levies and bonding can apply to specific areas in the City needing and benefiting from the improvements.

GRANTS

Grant monies are ideal for funding projects within the City since they do not need to be paid back and the City can greatly benefit from these funds. Grants are not easy to come by and therefore obtaining such funding is not likely for the City and should not be considered a viable revenue source.

IMPACT FEES

Impact fees are a way for a community to obtain funds to assist in the construction of infrastructure improvements resulting from and needed to serve new growth. The premise behind impact fees is that if no new development occurred, the existing infrastructure would be adequate. Therefore, new developments should pay for the portion of required improvements that result from new growth. Impact fees are assessed for many types of infrastructure and facilities that are provided by a community, such

as roadway facilities. According to state law, impact fees can only be used to fund growth related system improvements.

To help fund roadway improvements, impact fees should be established. These fees are collected from new developments in the City to help pay for improvements that are needed to the roadway system due to growth. At the culmination of the Transportation Master Planning process, a citywide IFFP will be developed according to state law to determine the appropriate impact fee values for the City.

IFFP CERTIFICATION

Horrocks Engineers certifies that this IFFP:

1. Includes only the costs of public facilities that are:
 - a. Allowed under the Impact Fee Act; and
 - b. Actually incurred; or
 - c. Projected to be incurred or encumbered within six years after the day on which each impact fee is paid;
2. Does not include:
 - a. Costs of operation and maintenance of public facilities;
 - b. Costs for qualifying public facilities that will raise the level of service for the facilities, through impact fees, above the level of service that is supported by existing residents;
 - c. An expense for overhead, unless the expense is calculated pursuant to the methodology that is consistent with generally accepted cost accounting practices and the methodological standards set forth by the federal Office of Management and Budget for federal grant reimbursement; and
3. Complies in each and every relevant respect with the Impact Fees Act